

### ABSTRACT OF THE DISCLOSURE

A transport system for transporting and handling microtiter plates, for use in high throughput screening, diagnosis and/or combinatorial chemistry, comprising modules with devices for preparing specimens and/or introducing specimens, and/or for optical readout and/or for plate storage and/or devices for further processing steps or readout steps. The system includes an inter-modular transport system for transporting the microtiter plates between the different devices and at least one central transport system for asynchronous plate transfer between individual modules via input and output buffers.